		NTSB ID: MIA98FA055		Aircraft Registration Number: N913FE	
		Occurrence Date: 01/09/1998		Most Critical Injury: Fatal	
		Occurrence Type: Accident		Investigated By: NTSB	
Location/Time					
Nearest City/Place MAIDEN	State NC	Zip Code 28650	Local Time 1704	Time Zone EST	
Airport Proximity: On Airport		Distance From Landing Facility: 1		Direction From Airport: 40	
Aircraft Information Summary					
Aircraft Manufacturer Cessna		Model/Series 208B		Type of Aircraft Airplane	
Sightseeing Flight: No			Air Medical Transport Flight: No		
Narrative					
Brief narrative statement of facts, conditions and circumstances pertinent to the accident/incident:					
History of the Flight					
<p>On January 9, 1998, about 1704 eastern standard time, a Cessna 208B, N913FE, registered to Federal Express Corporation, and operated by Mountain Air Cargo, Inc., crashed during takeoff from Little Mountain Airport, Maiden, North Carolina, while on a Title 14 CFR Part 91 positioning flight to Greensboro, North Carolina. Visual meteorological conditions prevailed at the time and no flight plan was filed. The aircraft was destroyed and the commercial-rated pilot was fatally injured. The flight was originating at the time of the accident.</p>					
<p>Company records showed that on the date of the accident, the accident pilot flew a roundtrip revenue flight from Greensboro to Wilmington, North Carolina, between 0704 and 0929. According to the pilot's family, he then drove home to Chapel Hill, North Carolina, from Greensboro. At about 1230, the pilot was called to go back to Greensboro to position a Cessna 208B, N769FE, from Greensboro to Huntington, West Virginia, position a Cessna 208B, N749FX, from Huntington to the maintenance base at Maiden, and position a Cessna 208B, N913FE, from Maiden to Greensboro. The pilot departed Greensboro in N769FE, under an instrument flight rules flight plan, at about 1400 and arrived at Huntington at about 1520.</p>					
<p>A witness on the ground at Huntington stated that when the accident pilot arrived in N769FE, he seemed to be in a hurry. The witness stated he was towing N749FX, the aircraft the pilot was to depart in, from the parking area and the pilot would not wait for him to stop before loading his flight bag. As he was towing N769FE back to the parking place, he noticed the pilot had already started the engine of N749FX and was starting to taxi for takeoff with the baggage door open. He went out and flagged down the pilot and closed the baggage door for him. The pilot who flew N769FE after the accident pilot delivered it to Huntington stated that when he got to the aircraft it appeared the accident pilot was "really in a big hurry." The pitot covers and engine covers had not been installed and he found the crew compartment door unlocked and the battery still hooked up.</p>					
<p>The pilot departed Huntington, under an instrument flight rules flight plan, at about 1545. Company personnel stated the pilot radioed to flight operations at Maiden when he was about 10 minutes from landing. He asked if he had to come up to operations and they responded "yes, you have to come to operations." He reported he had a birthday party to go to. The pilot arrived in N749FX at about 1647 and as he taxied to park the aircraft in front of the maintenance hangar, the left main gear and nose gear went off the taxiway into the mud. Maintenance personnel stated the pilot appeared to be in a hurry and operations personnel stated the pilot came to operations, dropped his paper work, and immediately left, stating again he had a birthday party to go to.</p>					
<p>The pilot departed the ramp in N913FE shortly after 1700. He radioed on the company radio frequency a short time later that he was departing on runway 3 and that he would report on arrival in Greensboro. No further contact with the pilot was made. The aircraft wreckage was located off</p>					
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Occurrence Type: Accident

Narrative (Continued)

the departure end of runway 3 at about 1745.

Personnel Information

Information on the pilot is contained in this report under First Pilot Information and in attachments to this report.

Aircraft Information

Information on the aircraft is contained in this report under Aircraft Information and in attachments to this report.

Meteorological Information

Visual meteorological conditions prevailed at the time of the accident. Additional meteorological information is contained in this report under Weather Information.

Flight Recorders

The Cessna 208B aircraft operated by Mountain Air Cargo, Inc. are equipped with Avionics Specialties, Inc., Power Analyzer and Recorder (PAR). The PAR records each engine start by date and time and includes engine parameters and pressure altitude, airspeed, and outside air temperature. The PAR also records each engine shutdown and calculates the engine run time, flight time, and number of landings. The PAR will also record engine parameters, pressure altitude, airspeed, and outside air temperature when electrical power from the aircraft is lost to the unit. This is accomplished by a battery in the PAR. Stored data in the PAR can be retrieved by a portable computer.

After the accident with N913FE, the PAR units from N769FE, N749FX, and N913FE were readout. The accident pilot flew N769FE from Greensboro, NC, to Huntington, WV. The PAR clock was found to be running eight minutes slow and the engine start time at Greensboro was recorded as 1847:08 UTC. This made the actual engine start time as 1355:08 EST. The actual engine shutdown time at Huntington was 1521:30 EST.

The accident pilot flew N749FX from Huntington to Maiden, NC. Readout of the PAR showed the clock was running nine minutes slow. The actual engine start time at Huntington was 1539:55 EST. The actual engine shutdown at Maiden was 1650:31 EST.

Readout of the PAR installed on N913FE showed the clock was three minutes slow. The actual engine start was recorded at 1700:18 EST. At actual time 1703:46 EST, the PAR loses electrical power from the aircraft and recorded data using the unit's battery. The engine NG was 90.3%, the NP was 1,895 RPM, the fuel flow was 317 PPH, the torque was 1,230 FLB, the ITT was 651 degrees centigrade, the pressure altitude was 968 feet, indicated airspeed was 98 knots, and the outside air temperature was 11 degrees centigrade. See attached PAR readout reports.

Wreckage and Impact Information

The aircraft crashed in a wooded area off the departure end of runway 3 at the Little Mountain Airport, Maiden, North Carolina. Postcrash examination of the runway showed the aircraft was still rolling on the 3,000-foot-long runway, about 800 feet from the departure end. The aircraft drifted to the left off the runway at this point and ran over a runway light about 500 feet from the departure end. The aircraft returned to the runway about 400 feet from the departure end and then proceeded across the runway and went off the right side of the runway near the departure end. The aircraft continued on a 040-degree heading and as the terrain dropped off the aircraft became airborne. The aircraft collided with trees where it came to rest about 500 feet

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from the departure end of the runway and 75 feet to the right of the extended centerline.

Postcrash examination of the crash site showed that as the aircraft traveled through trees, the propeller contacted limbs severing them and causing separation of the three composite propeller blades. Both wings were damaged and bent aft by tree impact forces and the tail section was bent to the right. The left side of the engine and cockpit area received damage from impact with a tree. All components of the aircraft which are necessary for flight were located on or around the main wreckage. Continuity of the flight control system was established. The engine continued to operate after the aircraft came to rest, leaving a hole in the ground from the propeller blade stubs and throwing dirt onto surrounding trees.

Postcrash examination of the engine showed it rotated normally and all accessory drive gears and accessories rotated normally. Uncontaminated fuel was found in the engine fuel system. Postcrash examination of the propeller showed each blade had separated due to impact with trees and that the propeller had no signs of mechanical failure or malfunction.

Postcrash examination of the aircraft cockpit showed the flight control lock was tangled in the instrument panel adjacent to the left control column where it is normally installed. The lock pin had several abnormal bends in it, including a 90-degree bend in the last 1/2 inch of the pin. Company personnel stated the control lock is normally stored on the cargo net behind the pilot's seat. Additionally, the pilot's shoulder harnesses were found in the stored position and were not being used by the pilot.

Medical and Pathological Information

Postmortem examination of the pilot was performed by Dr. Lee Ann Grossberg Krishnan, Pathologist, Office of the Medical Examiner, Chapel Hill, North Carolina. The cause of death was attributed to blunt force injury to head and neck. No findings which could be considered causal to the accident were reported. Postmortem toxicology studies on specimens obtained from the pilot were performed by the Office of the Medical Examiner and by Dr. Dennis V. Canfield, Manager, FAA Toxicology Laboratory, Oklahoma City, Oklahoma. The studies were negative for ethanol alcohol, carbon monoxide, cyanide, marihuana, basic, acidic, and neutral drugs. Additional medical and pathological information is contained in Supplement K and in the attached toxicology reports.

The pilot's family reported he had been sick with the flu the week prior to the accident and that he had only returned to work the day before the accident. The pilot had visited a doctor, but was not taking any prescription medications. The pilot's mother stated he was still not feeling well on the day of the accident. Family members also stated the pilot was scheduled to be back in Chapel Hill for a birthday party at 1800.

Company pilots who saw the accident pilot at Greensboro on the morning of the accident day stated the pilot appeared to be in good spirits and that nothing appeared out of the ordinary.

Additional Information

The aircraft wreckage was released to Mr. William C. Brooks, Director of Maintenance, Mountain Air Cargo, Maiden, North Carolina. Components retained by NTSB for further examination were released to Mountain Air Cargo.

A review of the Mountain Air Cargo Cessna 208B normal pilot operating checklist showed that during the before start check, the pilot is required to fasten the seat belt and harness and remove the flight control lock. He is then required to check the flight controls for freedom of movement. When entering the runway for takeoff, the pilot is again required to check the flight controls for freedom of movement. The checklist also shows that at the weight N913FE was taking off, the normal rotation speed was 70 knots. See attached checklist.

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Title 14 CFR Part 91.105b requires that a pilot shall fasten the shoulder harness during takeoff and landing.


An inventory of the pilot's flight bag after the accident showed that the instrument approach charts he was carrying were expired. The pilot had flown four flights on the day of the accident under instrument flight rules. Company personnel stated that pilots are given an allowance and are required to purchase and maintain current instrument approach charts and maps. The Mountain Air Cargo, Inc. Company Operations Manual states the pilot-in-command will have current instrument approach charts available on all flights. See attached pilot records and company operations manual pages.


Additional parties to the NTSB investigation were:

Kansas 67277	Joseph A. Hutterer	Cessna Aircraft Company	Wichita,
Carolina 28650	William C. Brooks	Mountain Air Cargo	Maiden, North
Quebec Canada	Thomas A. Berthe	Pratt and Whitney Engines	Longueuil,
	Tom McCreary	Hartzell Propellers	Piqua, Ohio 45356

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		Occurrence Type: Accident			
Landing Facility/Approach Information					
Airport Name	Airport ID:	Airport Elevation	Runway Used	Runway Length	Runway Width
LITTLE MOUNTAIN AIRPORT	66A	968 Ft. MSL	3	3000	100
Runway Surface Type: Asphalt					
Runway Surface Condition: Dry					
Type Instrument Approach:					
VFR Approach/Landing:					
Aircraft Information					
Aircraft Manufacturer	Model/Series		Serial Number		
Cessna	208B		208B00013		
Airworthiness Certificate(s): Normal					
Landing Gear Type: Tricycle					
Homebuilt Aircraft? No	Number of Seats: 2	Certified Max Gross Wt.	8750 LBS	Number of Engines: 1	
Engine Type:	Engine Manufacturer:	Model/Series:	Rated Power:		
Turbo Prop	P&W	PT6A-114	600 HP		
- Aircraft Inspection Information					
Type of Last Inspection	Date of Last Inspection	Time Since Last Inspection	Airframe Total Time		
AAIP	01/07/1998	0 Hours	6183 Hours		
- Emergency Locator Transmitter (ELT) Information					
ELT Installed? Yes	ELT Operated? Yes	ELT Aided in Locating Accident Site? No			
Owner/Operator Information					
Registered Aircraft Owner	Street Address				
FEDERAL EXPRESS CORPORATION	3101 TCHULAHOMA QA 5433				
	City	State	Zip Code		
	MEMPHIS	TN	38118		
Operator of Aircraft	Street Address				
MOUNTAIN AIR CARGO, INC.	3524 AIRPORT ROAD				
	City	State	Zip Code		
	MAIDEN	NC	28650		
Operator Does Business As: MOUNTAIN AIR CARGO			Operator Designator Code: MTNA		
- Type of U.S. Certificate(s) Held:					
Air Carrier Operating Certificate(s): Supplemental; On-demand Air Taxi					
Operating Certificate:			Operator Certificate:		
Regulation Flight Conducted Under: Part 91: General Aviation					
Type of Flight Operation Conducted: Positioning					
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First Pilot Information																																																																																						
Name			City		State	Date of Birth	Age																																																																															
On File			On File		On File	On File	29																																																																															
Sex: M	Seat Occupied: Left		Principal Profession: Civilian Pilot			Certificate Number: On File																																																																																
Certificate(s): Commercial																																																																																						
Airplane Rating(s): Multi-engine Land; Single-engine Land																																																																																						
Rotorcraft/Glider/LTA: None																																																																																						
Instrument Rating(s): Airplane																																																																																						
Instructor Rating(s): Airplane Single-engine																																																																																						
Type Rating/Endorsement for Accident/Incident Aircraft? No					Current Biennial Flight Review?																																																																																	
Medical Cert.: Class 1		Medical Cert. Status: Valid Medical--no waivers/lim.			Date of Last Medical Exam: 01/13/1997																																																																																	
<table border="1"> <tr> <th rowspan="2">- Flight Time Matrix</th> <th rowspan="2">All A/C</th> <th rowspan="2">This Make and Model</th> <th rowspan="2">Airplane Single Engine</th> <th rowspan="2">Airplane Multi-Engine</th> <th rowspan="2">Night</th> <th colspan="2">Instrument</th> <th rowspan="2">Rotorcraft</th> <th rowspan="2">Glider</th> <th rowspan="2">Lighter Than Air</th> </tr> <tr> <th>Actual</th> <th>Simulated</th> </tr> <tr> <td>Total Time</td> <td>4030</td> <td>860</td> <td>2880</td> <td>1150</td> <td>1500</td> <td>300</td> <td>90</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Pilot In Command(PIC)</td> <td>3900</td> <td>853</td> <td>2800</td> <td>1100</td> <td>1500</td> <td>300</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Instructor</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 90 Days</td> <td>89</td> <td>89</td> <td>89</td> <td></td> <td>40</td> <td>16</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 30 Days</td> <td>24</td> <td>24</td> <td>24</td> <td></td> <td>10</td> <td>6</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Last 24 Hours</td> <td>5</td> <td>5</td> <td>5</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>								- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument		Rotorcraft	Glider	Lighter Than Air	Actual	Simulated	Total Time	4030	860	2880	1150	1500	300	90				Pilot In Command(PIC)	3900	853	2800	1100	1500	300					Instructor											Last 90 Days	89	89	89		40	16					Last 30 Days	24	24	24		10	6					Last 24 Hours	5	5	5							
- Flight Time Matrix	All A/C	This Make and Model	Airplane Single Engine	Airplane Multi-Engine	Night	Instrument								Rotorcraft	Glider				Lighter Than Air																																																																			
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Last 30 Days	24	24	24		10	6																																																																																
Last 24 Hours	5	5	5																																																																																			
Seatbelt Used? Yes		Shoulder Harness Used? No			Toxicology Performed? Yes		Second Pilot? No																																																																															
Flight Plan/Itinerary																																																																																						
Type of Flight Plan Filed: None																																																																																						
Departure Point		State		Airport Identifier		Departure Time		Time Zone																																																																														
Same as Accident/Incident Location				66A		1704		EST																																																																														
Destination		State		Airport Identifier																																																																																		
GREENSBORO		NC		GSO																																																																																		
Type of Clearance: None																																																																																						
Type of Airspace: Class G																																																																																						
Weather Information																																																																																						
Source of Briefing: No record of briefing																																																																																						
Method of Briefing:																																																																																						

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		Occurrence Type: Accident			
Weather Information					
WOF ID	Observation Time	Time Zone	WOF Elevation	WOF Distance From Accident Site	Direction From Accident Site
CLT	1651	EST	749 Ft. MSL	24 NM	170 Deg. Mag.
Sky/Lowest Cloud Condition: Clear				0 Ft. AGL	Condition of Light: Day
Lowest Ceiling: None			0 Ft. AGL	Visibility: 25 SM	Altimeter: 29.00 "Hg
Temperature: 13 °C		Dew Point: 4 °C	Wind Direction: 210		Density Altitude: 900 Ft.
Wind Speed: 9		Gusts:	Weather Conditions at Accident Site: Visual Conditions		
Visibility (RVR): 0 Ft.		Visibility (RVV) 0 SM	Intensity of Precipitation: Unknown		
Restrictions to Visibility: None					
Type of Precipitation: None					
Accident Information					
Aircraft Damage:		Aircraft Fire:		Aircraft Explosion	
Classification:					
- Injury Summary Matrix	Fatal	Serious	Minor	None	TOTAL
First Pilot	1				1
Second Pilot					
Student Pilot					
Flight Instructor					
Check Pilot					
Flight Engineer					
Cabin Attendants					
Other Crew					
Passengers					
- TOTAL ABOARD -	1				1
Other Ground	0	0	0		0
- GRAND TOTAL -	1	0	0		1
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	Occurrence Date: 01/09/1998	
	Occurrence Type: Accident	
Administrative Information		
Investigator-In-Charge (IIC) JEFFREY L. KENNEDY		
Additional Persons Participating in This Accident/Incident Investigation: ROBERT J SCHILLING FAA FSDO CHARLOTTE, NC 28208 SAMUEL M STREET MOUNTAIN AIR CARGO MAIDEN, NC 28650 ALAN W RAY FEDERAL EXPRESS CORP. MEMPHIS, TN 38194 GEORGE WIGGAM FEDERAL EXPRESS CORP. MEMPHIS, TN 38194		
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